

**GREATEST ACHIEVEMENTS
OF PUBLIC HEALTH
1900-2010**

Good Health, Good Life

- The achievements in public health over the last century in the US have:
 - lengthened our lifespans (by over 30 years since 1900),
 - reduced the number of child deaths, and
 - made us stronger and more productive

Ten Greatest Public Health Achievements United States, 1901-2000

- Vaccination
- Motor Vehicle Safety
- Safer Workplaces
- Control of Infectious Diseases
- Decline in Deaths from Coronary Heart Disease and Stroke
- Safer and Healthier Foods
- Healthier Mothers and Babies
- Family Planning
- Fluoridation of Drinking Water
- Recognition of Tobacco Use as a Health Hazard

Ten Greatest Public Health Achievements United States, 2001-2010

Additions:

- Cancer Prevention
- Childhood Lead Poisoning Prevention
- Public Health Preparedness and Response

What Is Public Health?

- Prevent
- Promote
- Protect

Is public health just for those who fall through the cracks..?



CONFUSION OF PH AND MEDICAL CARE

- Medical care typically treats illnesses after someone is sick.
- Public Health attempts to prevent the illness in the first place.
- Upstream versus Downstream
- Public Health makes good fiscal sense because it is cheaper to prevent health problems than to fix them after the fact.

Mass Immunization Clinics



In 1900...

- Five leading causes of death (in order)
 - Pneumonia & Influenza
 - Tuberculosis
 - Diarrhea
 - Heart Disease
 - Stroke

ACHIEVEMENT:

Vaccinations

Vaccine-Preventable Diseases

- 1900 - 21,064 cases of Smallpox
 - 894 patients died
- 1920 - 147,991 cases of Diphtheria
 - 13,170 patients died
- 1920 - 469,924 cases of Measles
 - 7,575 patients died
- 1922 - 107,473 cases of Pertussis (Whooping Cough)
 - 5,099 patients died.



Today

- Vaccine-Preventable Diseases at record low levels in the United States
- Smallpox Eradicated
- Polio Has Been Eliminated In The Americas
- WHO (World Health Organization) Seeks Total Elimination of Polio in 2015



What Works?

- Development of new vaccines
- Immunization requirements for children in school and child care (supported by all major medical organizations)
- Immunization requirements for health care workers
- Influenza vaccine widely available

ACHIEVEMENT:
Prevention and Control
of
Infectious Diseases

Holland N. E. Sykes
Laura A. E. 6 yrs.
Melissa E. E. 5 yrs.
Lebina E. E. 4 yrs.
Born 1841, death Sept. 8, 1857

CHILDREN OF
Peter & Sophrona Moore
Wallace W. E. 11 yrs.

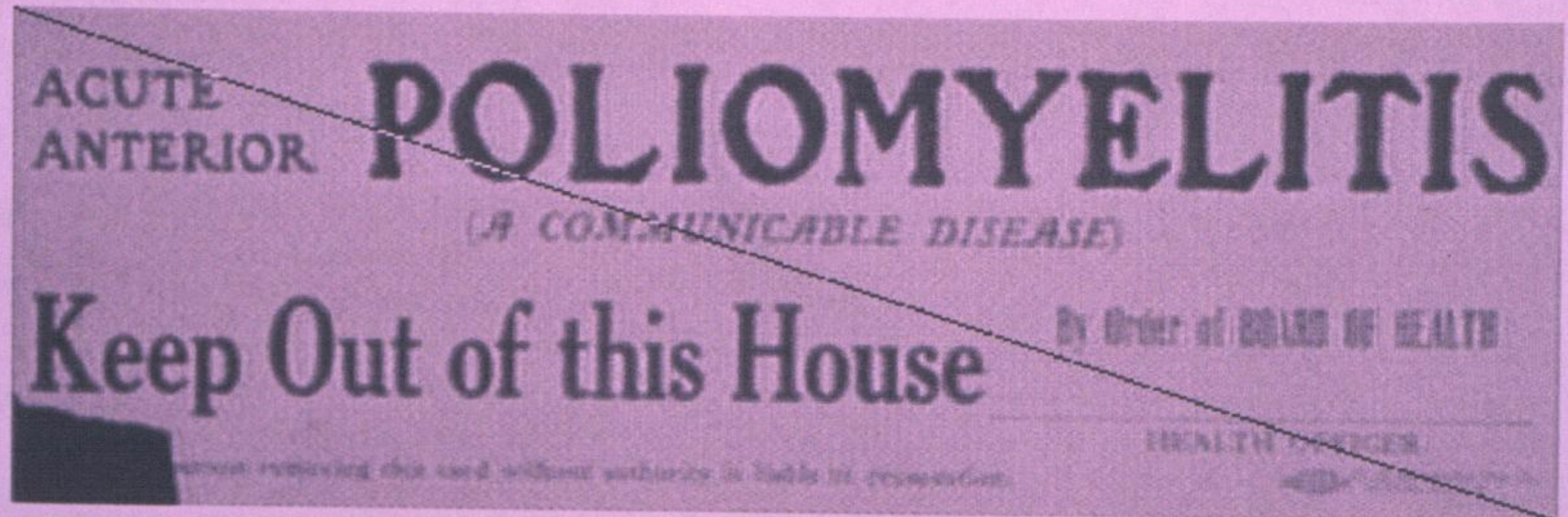
SOPHRO
WIFE OF
PETER MOORE
DIED
MAY 9, 1857

Prevention and Control of Infectious Diseases

At the beginning of the 20th Century

- Infectious diseases took many lives, especially among children
- Pneumonia, tuberculosis and diarrhea were the top 3 causes of death in 1900
- Very few prevention measures or treatments were available to control the spread of diseases

Prevention and Control of Infectious Diseases



What Works?

Control of infectious diseases has come from:

- Clean drinking water
- Improved sanitation
- Vaccinations
- Animal control regulations and services
- Improvements in laboratory testing
- Surveillance (disease reporting) laws and systems
- Antibiotic treatments

ACHIEVEMENT: Safer and Healthier Foods

Safer and Healthier Foods

- Contaminated food, milk, and water caused many foodborne infections in the past, including typhoid fever, tuberculosis, botulism, trichinosis and scarlet fever
- The diseases are different today, but still very common. About 1 in 6 Americans gets sick every year from contaminated food (48 million people). Of those, 128,000 are hospitalized and 3,000 die.

Safer and Healthier Foods

- Progress has been made:
 - Product labeling standards, refrigeration and pasteurization
 - Handwashing, sanitation, temperature controls and pesticide application
 - Healthier animal care, feeding, and processing
 - Strong inspection programs
 - Enforcement through regulations on food processing, retail sales and restaurants

Safer and Healthier Foods



Safer and Healthier Foods

- Mistakes are still made—LPHAs must maintain vigilance through inspections, food recall enforcement, disease surveillance and outbreak detection
- Mass food production and distribution means more multi-state outbreaks and food recalls

Safer and Healthier Foods



ACHIEVEMENT: Maternal and Infant Health

Healthier Mothers And Babies

- In 1900, 10% of infants died before age 1 and only 41% survived to age 65; in 1991, 80% survived to age 65
- Maternal death rates were high, caused by sepsis, hemorrhage and toxemia

Healthier Mothers And Babies

Improvements:

- Better hygiene and nutrition
- Safe drinking water and waste disposal
- Safe milk supplies, pasteurization
- Longer spacing of pregnancies, smaller families through family planning
- Early entry into prenatal care
- Management of pregnancies
- Safe delivery in general hospitals

Healthier Mothers And Babies WIC Program



Healthier Mothers and Babies

- The US still has higher maternal and infant mortality rates than other countries do, and rates are higher for black women and infants
- Incidence of low birth weight (LBW) has not decreased in recent decades. Can have many long-term effects.

Healthier Mothers And Babies



ACHIEVEMENT:
Decline in Deaths from
Heart Disease and Stroke

Decline in Deaths from Heart Disease and Stroke



Importance of Physical Activity

Decline in Deaths from Heart Disease and Stroke

- Although still the #1 killer, the cardiac death rate is 50% less than in 1900
- Death rates from coronary heart disease have decreased 51% since 1972
- These gains are threatened by increasing obesity rates (children and adults), physical inactivity and diabetes

Decline in Deaths from Heart Disease and Stroke



What Works?

- Risk-factor modification (diet, exercise, cholesterol reduction)
- Smoking cessation
- Blood pressure control
- Access to early detection and better treatment
- LPHAs can lead their communities to healthier habits!

ACHIEVEMENT:

Recognition of Tobacco Use as a Health Hazard

Recognition of Tobacco Use as a Health Hazard

There Are Old And New Challenges for Public Health



Recognition of Tobacco Use as a Health Hazard

- US adult cigarette smoking decreased from 24% (1998) to 19% (2010)
- US teen cigarette smoking decreased from 35% (1999) to 16% (2011)
- States with strong smoke-free laws grew from zero (1998) to 31 (2012)

Recognition of Tobacco Use as a Health Hazard



What Works?

- Public awareness campaigns
- Restrictions on smoking in workplaces and public places
- Availability of smoking cessation services
- Higher taxes on tobacco that discourage teen smoking

Missouri Lags Behind

- Smoking rates are 24% for adults (7th highest in US in 2012) and 18% for teens
- We are in the bottom 11 states for clean indoor air, given an “F” rating by the American Lung Association
- Lowest tobacco taxes in the nation

ACHIEVEMENT:
**Fluoridation of Drinking
Water to Prevent Dental
Caries**

Water Fluoridation and Dental Health



What Works?

- Water fluoridation began in 1945 and reached an estimated 144 million people (in 2000)
- 72.4% of the US population has fluoridated water
- Safely and inexpensively prevents tooth decay (regardless of socioeconomic status)
- Reduction of tooth decay in children by 40-70%
- Reduction of tooth loss in adults by 40-60%

Many Young People Have Never Had A Cavity...

Due to regular check-ups, dental sealants, fluoridation of water and fluoride treatments



Water Fluoridation and Dental Health

- In Missouri, more than 3.9 million citizens (79.8%) have access to fluoridated water.
- Missouri ranks 21st in the nation for water fluoridation
- We don't do as well in access to dental care, esp. for low-income children and adults
- Other factors, such as diet, still contribute to caries formation

References

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Thanks!

Questions